

Applications Note

Converting mpx100 to HP® Data Migration Appliance

Product Affected

Device Name	Part Number
mpx100	AE324-63003

To convert an mpx100 to an HP data migration appliance, follow these steps:

1. Reset factory defaults:

If the mpx100 unit has been previously used, it must be reset to the factory defaults. If the mpx100 is brand new, skip to [Step 2](#).

To reset the router and restore it to the factory default configuration, use a pointed, nonmetallic tool to press and hold the maintenance button until the heartbeat LED flashes 20 times, then release the button. The router boots and is restored to the factory defaults. The boot time is less than one minute.

[Figure 1](#) shows the LEDs and maintenance button.



1. HEARTBEAT LED
2. POWER LED
3. SYSTEM FAULT LED
4. MAINTENANCE BUTTON

Figure 1. LEDs and Maintenance Button Locations

2. Configure access to the mpx100 management port:

- a. Connect the router's 10/100 Ethernet port to your workstation using a switch or hub. Alternatively, connect your workstation directly to the router using an Ethernet crossover cable. The mpx100's management port's default IP address is 10.0.0.1 subnet 255.0.0.0.
- b. Make sure the workstation connected to the mpx100 router has Ethernet address 10.0.0.x, where x is other than 1 and the subnet mask is 255.0.0.0.
- c. From the workstation, open a command window. Using a telnet session, connect to the mpx100 using IP address 10.0.0.1. Login as **guest** and enter the password **password**. The Command Line Interface (CLI) prompt displays (**mpx100 #>**).

- d. Enter the CLI command **admin start**. The default password is config.
- e. Enter the **set mgmt** command at the **mpx100 (admin) #>** prompt.
- f. Select the mode. QLogic recommends static address mode, which is IPv4 Mode 0 [Static] (this is the default). Enter the IP address, subnet information, and gateway, if applicable. You will lose the connectivity of the telnet session at this time.
- g. If you want to continue using the CLI, restart the telnet session with the IP address you just assigned to the management port. You now have the management port configured with the appropriate IP address.
- h. Connect the management port cable to your Ethernet network.

```
*****
*                                *
*          HP StorageWorks mpx100      *
*                                *
*****
```

```
mpx100 #> admin start
Password      : config

mpx100 (admin) #> set mgmt

A list of attributes with formatting and current values will follow.
Enter a new value or simply press the ENTER key to accept the current value.
If you wish to terminate this process before reaching the end of the list
press 'q' or 'Q' and the ENTER key to do so.

WARNING:
The following command might cause a loss of connections to the MGMT port.

IPv4 Interface (0=Enable, 1=Disable)      [Enabled      ]
IPv4 Mode (0=Static, 1=DHCP, 2=Bootp, 3=Rarp) [Static      ]
IPv4 Address                            [10.0.0.1    ] 172.17.136.227
IPv4 Subnet Mask                         [255.0.0.0   ] 255.255.254.0
IPv4 Gateway                            [0.0.0.0     ] 172.17.136.1
IPv6 Interface (0=Enable, 1=Disable)      [Disabled     ]

All attribute values that have been changed will now be saved.
```

- i. Verify that the IP address is set correctly by typing the **show mgmt** command.

```
mpx100 (admin) #> show mgmt

Management Port Information
-----
IPv4 Interface      Enabled
IPv4 Mode          Static
IPv4 IP Address    172.17.136.227
IPv4 Subnet Mask   255.255.254.0
IPv4 Gateway        172.17.136.1
IPv6 Interface      Disabled
Link Status         Up
MAC Address         00-c0-dd-0d-0e-18
```

3. Upgrade mpx100 with data migration firmware:

Now that connectivity to the mpx100 management port is established, load the data migration firmware into the unit using FTP. Do not forget to do a **bin** command before you put the firmware file on the mpx100.

- a. Open a command prompt on your workstation.
- b. Change to the directory on your workstation that contains the mpx100 firmware file.
- c. Type **ftp** followed by a space, then the IP address of the mpx100 management port, then press ENTER.
- d. At the User (*IP address*) prompt, type **ftp**, then press ENTER.
- e. As the Password prompt, type **ftp**.
- f. Type **bin**, then press ENTER.
- g. Type **put mpx100-x_x_x_x.bin**, where *x_x_x_x* is the firmware version being installed.
- h. Verify that the file transferred correctly.
- i. Type **bye**, then press ENTER.

```
ftp 172.17.136.227
Connected to 172.17.136.227.
220 (vsFTPd 2.0.5)
User (172.17.136.227:(none)): ftp
331 Please specify the password.
Password: ftp
230 Login successful.
ftp> bin
200 Switching to Binary mode.
ftp> put mpx100-2_4_1_0dmrc12g.bin
200 PORT command successful. Consider using PASV.
150 Ok to send data.
226 File receive OK.
ftp: 8574496 bytes sent in 0.73Seconds 11681.87Kbytes/sec.
ftp> bye
221 Goodbye.
```

- j. Verify that the firmware image was successfully transferred to the mpx100 by tying the **image list** command in the mpx100 CLI.

```
mpx100 (admin) #> image list

mpx100-2_4_1_0dmrc12g.bin
```

- k. Unpack the image by typing the **image unpack** command. Enter **yes** when prompted to reboot.

```
mpx100 (admin) #> image unpack mpx100-2_4_1_0dmrc12g.bin
```

```
Unpack Completed. A reboot is required for the FW to take affect.  
Do you wish to reboot the System at the current time (y/n): y  
System will now be rebooted...
```

- l. When the mpx100 is finished rebooting, verify that the new firmware loaded successfully by typing the **show system** command.

```
mpx100 #> show system
```

```
System Information  
-----  
Product Name          HP StorageWorks mpx100  
Symbolic Name  
Embed Symbolic Name  Disabled  
System Mode           iSCSI Server Connectivity  
Controller Lun AutoMap Enabled  
Serial Number         MXK821C011  
HW Version            6 (IPv6 Supported)  
SW Version          2.4.1.0dmrc12g  
No. of FC Ports       2  
No. of iSCSI Ports    2  
Log Level             0  
Log Length (KB)       32768  
Temperature (C)       38
```

4. Change the mpx100 mode from *iSCSI Connectivity* to *Data Migration*:

Even though the mpx100 is now running data migration capable firmware, it must be set to data migration mode:

- a. At the prompt, type the **set system** command.
- b. Type **1** to change the mode to data migration
- c. Enter **yes** when prompted to reboot.

```
mpx100 (admin) #> set system

A list of attributes with formatting and current values will follow.
Enter a new value or simply press the ENTER key to accept the current value.
If you wish to terminate this process before reaching the end of the list
press 'q' or 'Q' and the ENTER key to do so.

WARNING:
If enabled by operator, the Symbolic Name can be embedded as part of the
Only valid iSCSI name characters will be accepted. Valid characters include
alphabetical (a-z, A-Z), numerical (0-9), colon, hyphen, and period.

Changes to the Settings below will be effective after a reboot.

System Symbolic Name (Max = 64 characters) [ ]
Embed Symbolic Name (0=Enable,1=Disable) [Disabled]
Mode (0=iSCSI Server Connectivity
      1=Data Migration
      2=Data Migration Demo Mode) [iSCSI Connectivity] 1
Controller Lun AutoMap (0=Enable, 1=Disable) [Enabled]
System Log Level (Min = 0, Max = 3) [0]

WARNING:
The system operation mode has been modified. Changing the
mode of the system will cause all mapping related configuration
of the system to be removed. The system will reboot after
updating the mode.

Do you wish to continue with the operation? [No] yes
```

- d. After the reboot, verify that the mpx100 is in data migration mode by typing the **show system** command.

```
*****
*          HP StorageWorks mpx100
*
*****
mpx100 #> show system

System Information
-----
Product Name      HP StorageWorks mpx100
Symbolic Name
Embed Symbolic Name    Disabled
System Mode        Data Migration
Controller Lun AutoMap   Enabled
Serial Number     MXK821C011
HW Version         6
SW Version         2.4.1.0dmrc12g
No. of FC Ports    2
No. of iSCSI Ports   2
Log Level          0
Log Length (KB)    32768
Temperature (C)     42
```

5. Obtain the mpx100 serial number:

Use the **show system** command to display the correct serial number for your mpx100. This is the only valid way to obtain the mpx100 serial number. *Do not simply record the serial number from the back of the unit!* You must use the serial number displayed by this command in the software.

```
*****
*          *
*      HP StorageWorks mpx100      *
*          *
*****  
  
mpx100 #> show system  
  
System Information  
-----  
Product Name          HP StorageWorks mpx100  
Symbolic Name  
Embed Symbolic Name  Disabled  
System Mode           Data Migration  
Controller Lun AutoMap Enabled  
Serial Number         MXK821C011  
HW Version            6  
SW Version            2.4.1.0dmrc12g  
No. of FC Ports       2  
No. of iSCSI Ports    2  
Log Level             0  
Log Length (KB)       32768  
Temperature (C)       42
```

If the plenum has been removed from the mpx100 for easier transport, the QLogic serial number will be visible. If you have an mpx100 unit with the plenum removed, you must use the CLI or GUI to obtain the correct serial number for the mpx100. See [Figure 2](#) and [Figure 3](#).

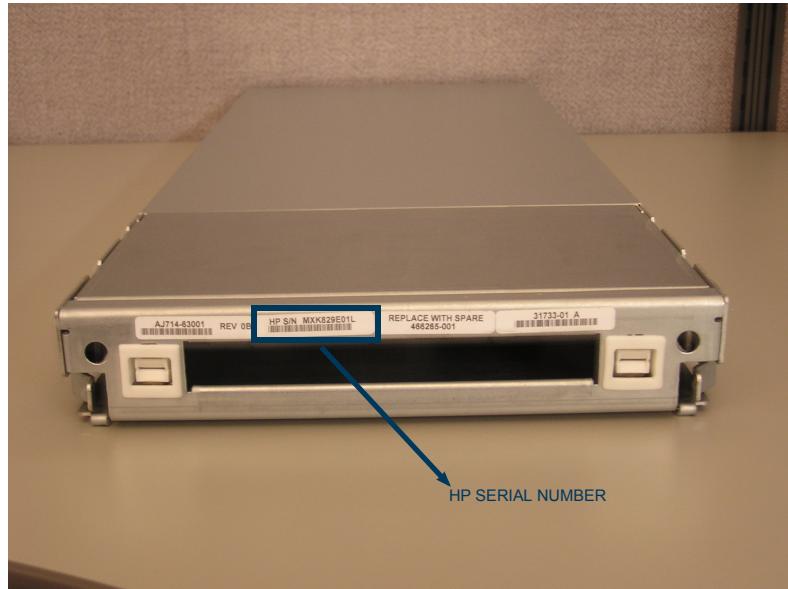


Figure 2. mpx100 With Plenum



Figure 3. mpx100 Without Plenum (Do Not Use this Serial Number)

Document Revision History

Revision A, March 24 2009

Changes

Initial release.



Corporate Headquarters QLogic Corporation 26650 Aliso Viejo Parkway Aliso Viejo, CA 92656 949.389.6000 www.qlogic.com

Europe Headquarters QLogic (UK) LTD. Quattro House Lyon Way, Frimley Camberley Surrey, GU16 7ER UK +44 (0) 1276 804 670

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